

Press

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LD converter (BOF) supplied by Primetals Technologies starts up at ArcelorMittal's steel plant in Gent

- Successful startup of large LD converter with innovative suspension system
- LD converter lifted over 10-meter-high pipe bridge at the steel plant shortly before shutdown
- Optimized reaction volume and vessel shape to further improve yield and energy efficiency toward benchmark levels

Recently, a new LD converter (BOF) implemented by Primetals Technologies was started up at ArcelorMittal Belgium's steel plant in Gent, Belgium. To meet the demands on pre-assembly works, Primetals Technologies came up with several innovative ideas.

Lifting a 380-ton converter

ArcelorMittal Belgium wanted most of the pre-assembly works to be done at the manufacturing site in Poland as a way of avoiding possible delays. The vessel and trunnion ring had been assembled as one unit in Poland, rendering the result too big to pass underneath an existing pipe bridge at the steel plant in Gent. Therefore, using a 1000-ton crane, Primetals Technologies lifted the vessel and trunnion ring – weighing around 380 tons altogether – over the 10-meter-high pipe bridge.

Thanks to good planning and preparation, Primetals Technologies met the customer's tight 35-day timeline without any interruption in the ongoing production at LD converter No. 3 during the shutdown. As an example, Primetals Technologies made key preparations during a pre-shutdown in June 2021 to ensure that everything would be running smoothly during the revamp.

"From the start of our project until commissioning we experienced a very professional collaboration with the project team of Primetals Technologies," says Glenn Gosseye, Project Manager at ArcelorMittal Belgium.

"Although it was performed in a very challenging environment, we managed to stay within our target of a 35-day shutdown," says Hannes Seys, Project Engineer at ArcelorMittal Belgium.

Optimized converter shape

The LD converter supplied to ArcelorMittal Belgium by Primetals Technologies features an optimized converter shape. This will further increase both yield and energy efficiency of the steelmaking process. Another important feature is the Vaicon Link 2.0 – a suspension system that keeps the vessel stable in all

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directions and still allows for thermal expansion. It ensures ideal conditions during the whole lifetime of the converter. Primetals Technologies developed this system more than 20 years ago and has continuously refined it.

Average LD converter heat sizes are around 180 tons, hence a heat size of 330 tons makes this LD converter one of the world's largest. In total, Primetals Technologies supplied ArcelorMittal Belgium with 1,000 tons of equipment while installing the LD converter in Gent.

High quality flat products

The project scope includes engineering and building as well as the supply of the following equipment: converter, trunnion ring, maintenance free suspension system, tilting drive, rotary joint and piping, slag shields, and parts of the doghouse. The existing slag stopper, supplied by Primetals Technologies in 2013 was reused.

ArcelorMittal Belgium is part of ArcelorMittal Europe's Flat Products division. The plant produces high quality flat products to serve various markets including the automotive, household electrical appliances, and construction industries. Primetals Technologies has a long history of successful projects with ArcelorMittal, among them the supplying of several large LD converters, with a heat size of 300 tons, to plants in Spain and Poland.



Charging of the new LD converter at ArcelorMittal's steel plant in Gent during first heat.

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